



Green Power Strategies

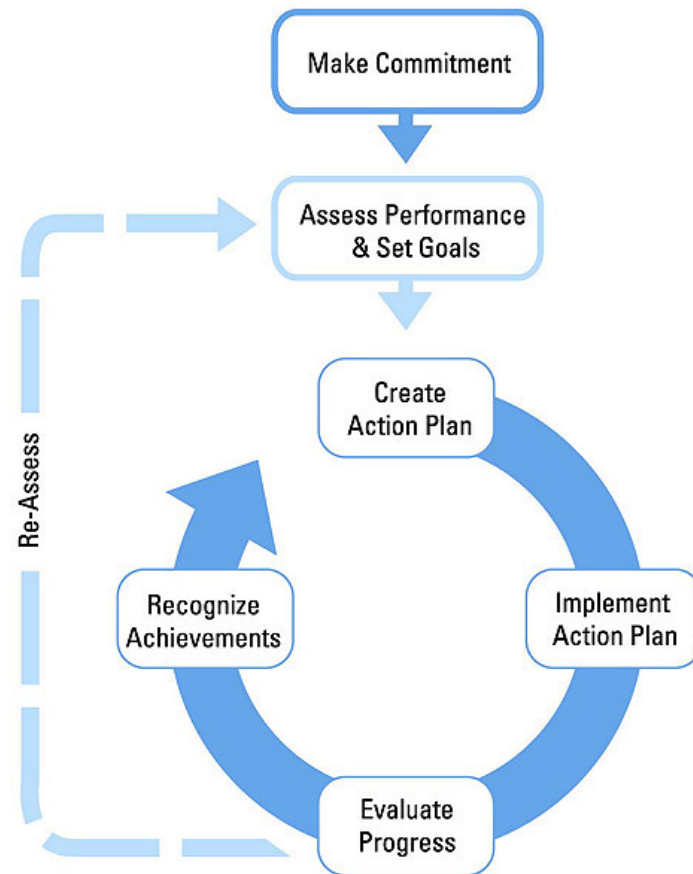
Web Conference
February 20, 2008

Call in number 866 299 3188
Conference code: 202 343 9965#

About The Web Conferences



- **Monthly**
- **Topics are structured on a strategic approach to energy management**
- **Help you continually improve energy performance**
- **Opportunity to share ideas with others**
- **Slides are a starting point for discussion**
- **Open & interactive**



Web Conference Tips



- Mute phoned when listening! Improves sound quality for everyone.
Use # 6 to un-mute and * 6 – to re-mute
- Presentation slides will be sent by email to all participants following the web conference.

Today's Web Conference



- Welcome
- Blaine Collison, Green Power Partnership
- Robert Schasel, PepsiCo
- Marty Sedler, Intel
- Questions & Discussion
- Announcements



Green Power: An Opportunity for ENERGY STAR Partners

Blaine Collison

US EPA Green Power Partnership



The Key Questions

- **Why should my company buy green power?**
 - “Electricity is electricity, right?”
- **What are my green power options?**
 - “Are there different technologies or products?.”
- **How do I buy green power?**
 - “My utility doesn’t offer green power. Now what?”
- **How much will green power cost?**
 - “Why would I pay more for a commodity like this?”
- **How can EPA provide assistance?**
 - “How does my company talk about this?”



Green Power Partnership Overview

- Same EPA program family as ENERGY STAR & Climate Leaders
- Voluntary program in which partners use green power to meet a portion of their electricity needs
- Program provides:
 - **Credibility** - Definition of eligible renewables, purchase requirements
 - **Recognition** - Top 25 and Top 10 lists, Green Power Leadership Awards, use of the Partnership logo
- More than 850 partners are purchasing more than 13 million MWh of green power annually



Green Power Value Proposition

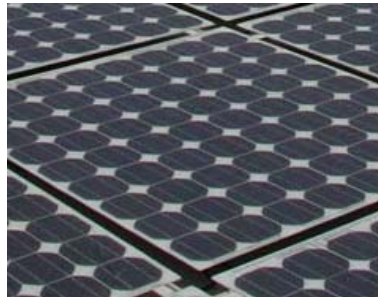
- **Delivers high-impact/low-cost value**
 - More than 400 Partners using 100% green power
- **Deploys quickly & scales up easily**
 - Most Partners increase GP purchase over time
- **Translates well to customers, management, employees & other stakeholders**
- **Captures favorable media attention**
 - Clean technology
 - Domestic energy supply
 - New U.S. jobs
- **Addresses indirect emissions**
- **Carries strong business case with price stability**



What Is Green Power?

- Green power is an “environmentally-differentiated”
electricity product from:

- solar
- wind
- geothermal
- biomass
- biogas
- small hydro



Buying Green Power

What Are My Product Options?

1. Green Power Electricity Products

- Buy electricity from utility green pricing programs or green power retail marketers that is all or partially generated from renewable sources



2. Renewable Energy Certificates (REC)

- Buy only the “attributes” associated with the electricity generated (1 REC = 1MWh)



3. On Site Generation

- Install renewable energy system on site, e.g. Solar panels



- *Key for purchasers: Full options for sourcing by technology (wind v. solar etc.), geography (local, regional, national), price to meet stakeholders' expectations.*

How Do I Get Green Power & What Will It Cost?

- **Green power is available from some utilities and a broad market of third party vendors**
 - Green Power Locator has a full list:
<http://www.epa.gov/greenpower/pubs/gplocator.htm>
- **Cost will vary based on supplier, technology, geography**
 - New England solar costs more than West Texas wind
- **First key decision is bundled (utility) v. unbundled (REC) product**



Purchasing Requirements

Annual Electricity Use (MWh) *	Minimum Purchase Requirements**	Leadership Club Requirements
> 100,000	2%	20%
100,000 to 10,001	3%	30%
10,000 to 1,001	6%	60%
< 1,000	10%	N/A

Note: A Partner must meet the purchase requirements for all of its U.S. facilities to be in the Leadership Club.

*Customers with annual load less than 1,001 MWh are not eligible for the Green Power Leadership Club. EPA will recognize Partners separately who fall in this size category and purchase 100% green power.

**The Leadership Club purchase requirement must be met with "new" renewables.



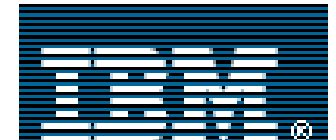
How Does GPP Help?

- **Detailed Partnership requirements**
 - Organizations may join as a single facility, a group of facilities/division/operating unit or entity-wide.
- **Green Power Locator**
 - Comprehensive list of local, regional & national green power providers, RECs brokers
- **Guide to Purchasing Green Power**
 - Step-by-step instructions, issues, details
- **Green Power Partner logo and guidelines**
- **Environmental claims calculators**
- **Partner recognition**
 - National Top 25, Sector Top 10 lists
 - Fortune 500 Challenge



A Few of EPA's 850+ Partners

- Purchasing + 13 Million MWh



Questions?

Blaine Collison
Green Power Partnership
(202) 343-9139

collison.blaine@epa.gov

www.epa.gov/greenpower



Appendix - Green Power Partners: Who's Buying & How Much?

Industry	Partners	Average MWh	Total MWh
Information Technology	38	52,227	1,984,622
Food & Beverage	34	54,521	1,853,701
Govt. (Federal)	15	109,647	1,644,708
Retail	64	22,565	1,444,166
Govt. (Local, Municipal)	76	18,839	1,431,799
Education (Higher)	81	14,604	1,182,886
Banking & Fin. Svcs.	21	48,122	1,010,565
Health Care	36	13,400	482,386
Travel & Leisure	57	6,116	348,584
Govt. (State)	10	30,749	307,488
Green Power Community	13	22,908	297,809
Consumer Products	30	7,886	236,576
Restaurants & Food Svcs.	26	8,437	219,354
Non-Profit (NGO)	59	3,238	191,031



PERFORMANCE
WITH PURPOSE

Environmental Sustainability
at PepsiCo

Performance with Purpose



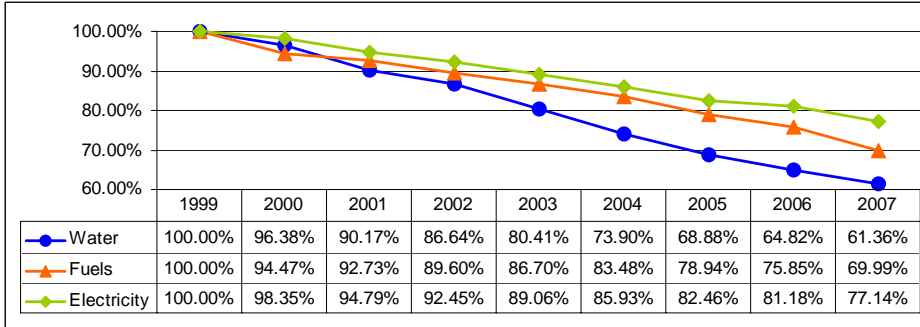
*"Performance with Purpose empowers PepsiCo to do better by doing better."
– Indra Nooyi, PepsiCo Chairman and CEO*

- Performance dimension
 - Consistent and sustained profitable growth
- Purpose dimension
 - Human sustainability
 - Begins with our products and commitment to nurture the consumer
 - Health & Wellness journey more than decade old
 - Focus on innovation to continually improve portfolio.
 - Talent sustainability
 - Attract, hire, develop, reward and retain best and brightest
 - Continue to enhance our diverse and inclusive workforce
 - Cherish our People
 - Environmental sustainability
 - Conserve our planet's natural resources
 - Focused on water, energy and waste where we can have an impact
 - Extend beyond our own operations to our partners and the community

Efficiency Improvement



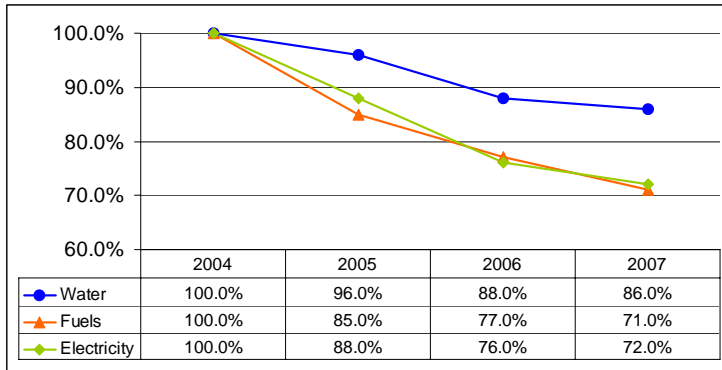
We've been driving Resource Conservation improvement since 1999.



Frito-Lay Use Index

Tracking data since 1999

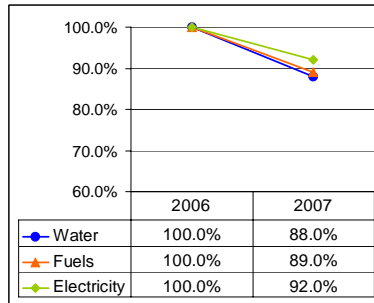
- Water 39% lower gal/lb
- Fuels 30% lower Btu/lb
- Electricity 23% lower kWh/lb



QTG Use Index

Tracking data since 2004

- Fuels 29% lower Btu/lb
- Electricity 28% lower kWh/lb
- Water 14% lower gal/lb



PepsiCo Intl. Index

Tracking data since 2006

- Fuels 11% lower Btu/lb
- Electricity 8% lower kWh/lb
- Water 12% lower gal/lb

Innovative Energy Project Examples



PepsiCo has pursued innovative energy projects, including renewables.

- Combined heat and power at sites
 - 2 facilities have cogen CHP systems
 - First implemented in 1987
- Landfill gas projects
 - 2 sites directly consume landfill gas in boilers
 - First implemented in 1999
- Photovoltaic generation
 - 7 sites with PV rooftops
 - First implemented in 2002
- Anaerobic digestion with methane capture
 - 4 sites offsetting natural gas consumption
 - Including one site internationally
- Solar Thermal Projects
 - Solar Boiler constructed in China
 - Solar Trough construction in California
 - Solar wall air preheating in Canada



PepsiCo Partnership with EPA



PepsiCo benefits greatly from our partnership with the EPA Climate Protection Programs.

- Energy Star
 - Member since 2004
 - Partner of the Year (Frito-Lay) 2006
 - Partner of the Year (PepsiCo) 2007
- Climate Leaders
 - Member since 2004 (Frito-Lay)
 - PepsiCo 2007
- SmartWay Transport Partnership
 - Member since 2006 (Frito-Lay)
- Environmental Performance Track
 - First Site Recognized 2007
 - Frito-Lay Jonesboro
- Green Power Partners
 - Member since 2007



Renewable Energy Certificates



PepsiCo on the EPA Green Power Purchasers List



- Center for Resource Solutions Green-e Certification
 - Most Rigorous Certification Standard Available
 - The Basis for EPA Green Power Partnership Standard
 - Ensures that RECs are Generated, Sold Once and Retired
- Alignment Within Electric Interconnects
 - Renewable Generation is Geographically Close to our Site
- Detailed Accounting of Each Generation Source
 - Delivered Along With the Certificates
- Verification Visits Conducted
 - PepsiCo Visited Sites to Verify Renewable Operation

<u>Ranking</u>	<u>Company</u>	<u>Green Power Usage (kWh)</u>	<u>% of total Electricity</u>
1	Intel	1,302,040,000	4600%
2	PepsiCo, Inc.	1,105,045,154	100%
3	US Air Force	899,143,000	9%
4	Wells Fargo & Co	550,000,000	42%
5	Whole Foods	509,104,786	100%
6	Pepsi Bottling Group	457,851,838	100%
7	Johnson & Johnson	400,702,978	39%
8	Cisco Systems	373,500,000	51%
9	City of Dallas, TX	333,659,840	40%
10	HSBC North America	300,000,000	93%
11	US EPA	299,331,375	100%
15	Starbucks	185,000,000	20%
17	US Dept of Energy	157,964,000	3%
19	PepsiAmericas	157,062,875	100%
	Pepsi Bottling Ventures	14,541,081	100%

Green-e Makes Big Splash in '07



“Green-e” logo



“We buy green energy Credits to offset 100% of the electricity needed to make SunChips”

Moving Forward



- To succeed in the future
 - Social, Environmental and Geo-Political issues must be included in our business strategy
- We are committed
 - To respecting and preserving the natural environment and its relationship with our business.
- Open to innovative opportunities
 - Technology development
 - Commercial scale trial projects
 - Partnerships with our suppliers, communities and governments
- From our CEO, Indra Nooyi
 - “We will do better by doing better.”
 - “Profit is where a business’ responsibility begins, not ends.”

Energy Star

February 20, 2008

Marty Sedler

Director, Global Utilities and Infrastructure



Major Sites



2007 Energy Spends ~\$400M

February 20, 2008

Eco-Technology

Sustainable
Manufacturing



Energy Efficient
Performance



Design for
the Environment



Policy &
Industry



February 20, 2008

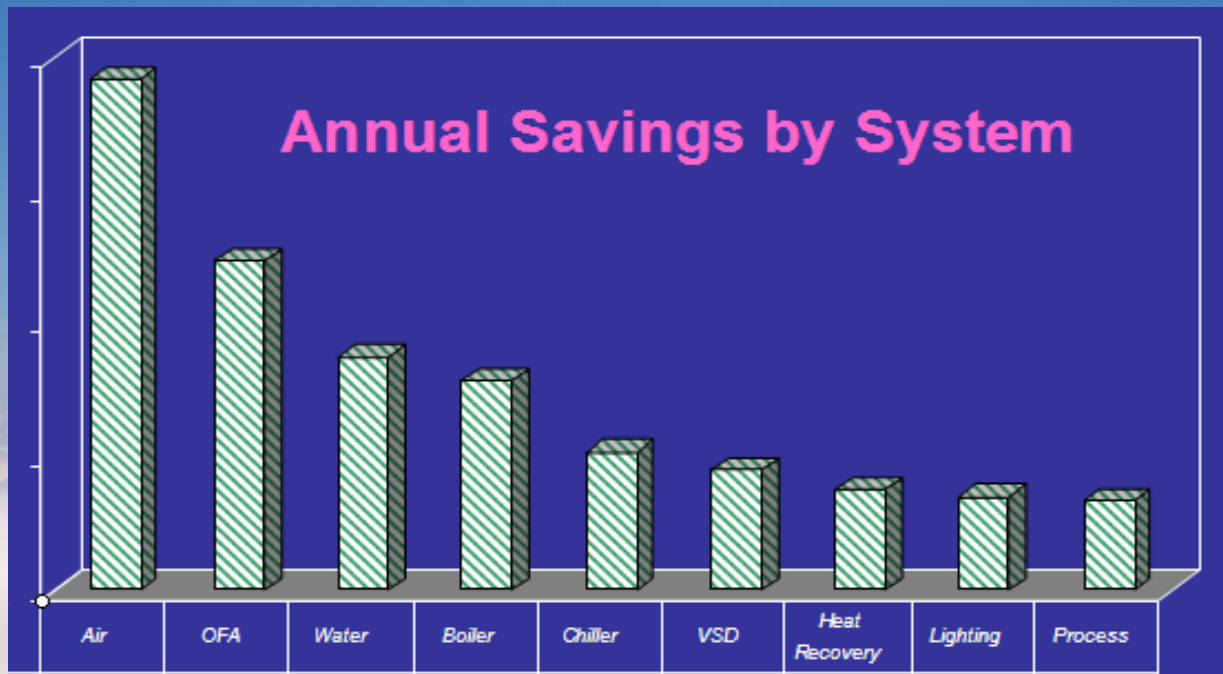
Energy Focus

- Longstanding Focus:
 - Design for Less
 - Use Less
 - Product Use Efficiency
 - Sustainability



Use Less

- Dedicated Conservation Capital Funding Program
 - >\$20M invested, >\$45M saved
 - > 250 projects, >600M-kwh +NG saved
 - Conservation is “the gift that keeps on giving”
 - Conservation has the most impact of all green options



Intel Green Power Process

- Created ECO-CSD to Develop Position, not pre-supposed
- Needed Champion
 - Sr Executive Factory VP
- Created X-functional interest/support at Sr Mngt level
 - Set a team of EHS/Marketing/PR/Energy Supply/ CR
- Provided Best Data on what others are doing
 - Didn't want to just follow, wanted to make a difference
- Expert opinion on value/strategies/options
 - Which option has what impacts?
 - Generate (on site own/PPA/off-site... if legal?)
 - Buy Energy/RECs
 - Etc
- Highest levels, don't empower more people to stop you.
 - Strategic Focus...

Why Buy Green?

- Economics? Unlikely (unless very/very high rate location)
 - Stakeholders: Shareholders, Employees, Customers, Environment?
- Right thing to do in today's environment?
 - Who are you as a company and what can you do?
- Find a way to accomplish your intent
 - What are all the benefits to your company?
 - Don't just say 'good PR' are their strategic focus
- Take an educated gamble/risk... no data to support any benefit scenarios
- Make a Difference... otherwise, you did waste money/time and resources

Desired Intent

- Stimulate the Market
 - Strategic Cost Impacts for future
 - Improve manufacturing economies of scale
 - Hopefully eliminate incentives/tax money in future
 - Support Technology Advancements
 - Support Projects to keep them coming
 - Demonstrate end user desire for these options
- Re-enforce Employees: Proud to be employed
- Ensure the Highest Ethics in ALL we say and Do!
- Right Thing to Do.

Final Direction Options?

- Physical Project Only?
 - Time lag, resources
 - 20+ year physical? Site dependent
 - Scale due to our profile
 - Economics
 - Physical issues
 - Impact to market/industry
 - Narrow physical focus (site?)

Final Direction Options (cont.)

- Green Energy Purchase
 - Timing: Quick implementation
 - Regional Diverse - Entire US focus
 - Technology shared support
 - Wide impact: EPA/Green-e/ other programs
 - Minimize Resources required
 - Best messaging opportunity to show support
 - Wider employee ownership feeling... Corporate
 - **Biggest Market Impact**
 - **Separate from just another project**
 - **Keep the discussion active will create results**

Purchase Strategy

- Integrity/high road in all actions
- Not all cost driven, but goal focused
- Diversity of Impacts
 - Spec'd generation from regions we operate
 - Supports local areas
 - Supports employees
 - Supports national (**Global** climate change)
 - Spec'd variety of generation
 - Non-discriminatory focus
 - Provides funding to various technologies
 - Multi-year contract
 - Secures and demonstrates **Commitment**
 - Mitigates price volatility risk
 - Still allows flexibility in further future for market change

Lessons Learned/Considerations

- Absolute Integrity! Do what you say! Highest Ethics!
- Market Changes during evaluation period
- Size of Purchase
- Who can be a strategic Partner? Add Value?
- Market Impacts of multiple bids?
- Secrecy during process – market inquiries?
- What are the rules? What counts where?
- How you say it? Interpretation?
- Lack of understanding of Energy business
 - What did you do?
- Address as many stakeholders/interested parties as possible
- Develop entire strategy from purchase through announcements...
Ask:
 - **“what could go wrong”**
 - **“what could be objectionable”..... fix it**

Questions?





Questions & Discussion

2008 Web Conferences



Month	Topic
January	ES Update
February	Green Power Strategies
March	Engaging Employees in Energy Efficiency
April	Leading Energy Programs – ES Partners of the Year
May	Energy Efficiency and Green Buildings
June	Our Top 3 Energy Projects
July	Motivating and driving facility performance
August	“Cool” Energy Savings Strategies
September	Supply Chain Energy & Climate Initiatives
October	Energy & Climate Risk Management
November	Energy Strategy & Project Financing

Past Presentations – See “Networking Opportunities” @ energystar.gov



Thank you for participating!